EXTENSION

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HE FARM AND FARM HOME MAGAZINE April, 1962

THE PICTURE ON THE COVER

Don't wait for the wind for winnowing. There are machines and fans to help you out. This portable fan, mostly used for paddy, is pedal operated. It costs just about Rs. 30, but does a very quick and clean job of winnowing.

EXTENSION

THE FARM AND FARM HOME MAGAZINE

Vol. II April, 1962 No. 10

CONTENTS

CROPS AND SOIL

3 reminders to Punjab cotton growers 2

Green manuring at almost no cost 12

Four steps to better *bajra* yield 20

Your kitchen garden should have malta lemon 24

FERTILIZERS

The Rajasthan farmers' fertilizer guide 17

FARM IMPLEMENT

Attach a ridger to your cultivator 4

POULTRY

The poultry breeds that pay 5

ANIMAL HUSBANDRY

Cutting short the dry period of cows 10

CROP PESTS AND DISEASES

Blights of potato 25

FARM HOME

A case for your needles 26

A tasty pudding from the tender coconut 28

BETTER FARMING TIPS 22

SPECIAL FARM FEATURE 14

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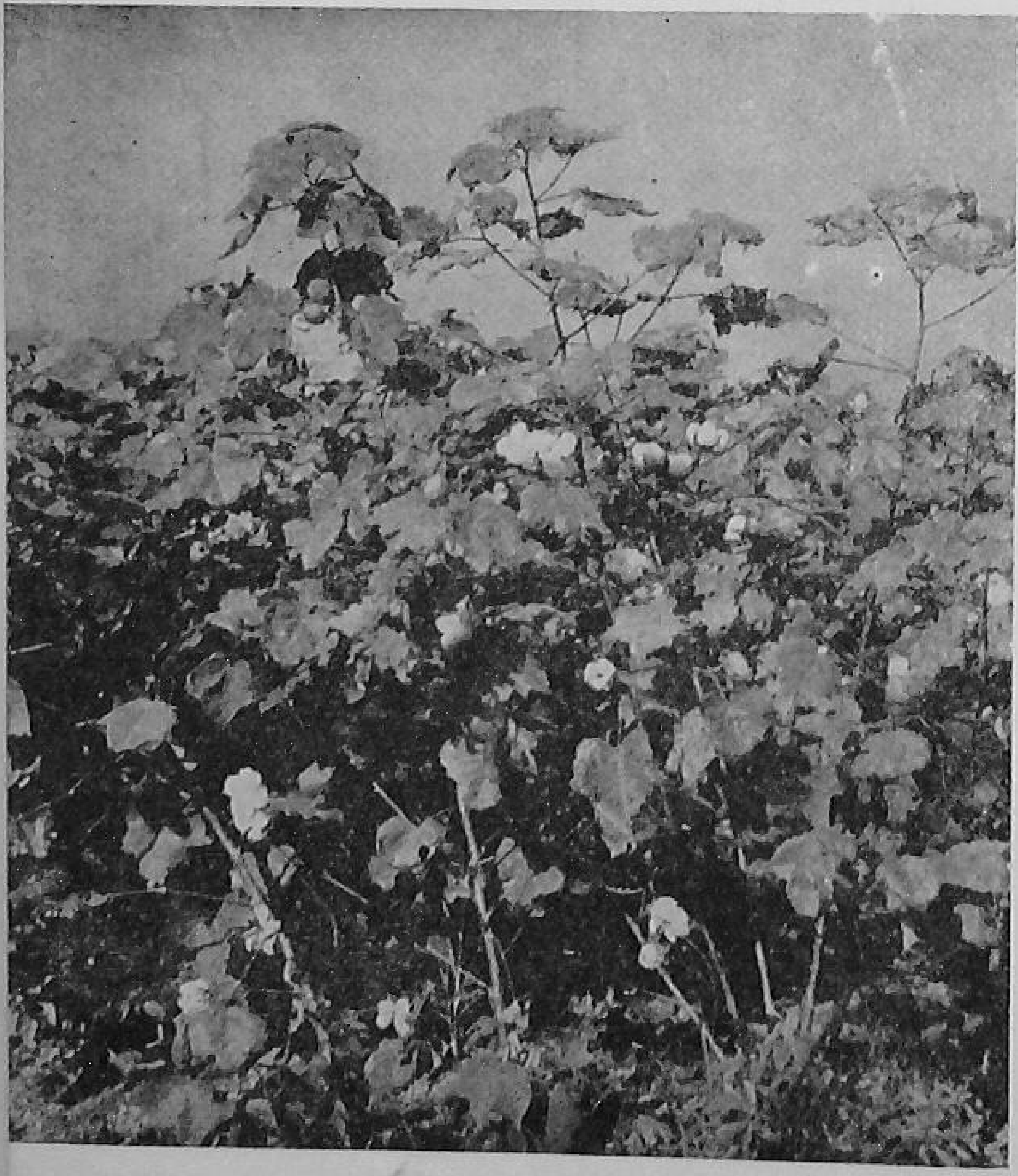
3 REMINDERS TO PUNJAB COTTON GROWERS

Cotton growers are sure to make more money only if they remember to do the right things at the right time



FARMERS growing American cotton in the Punjab should follow a proper manuring, spraying and irrigation schedule to get high yields from the crop they have sown.

1. Irrigate Copiously

About three to four weeks after sowing water the field copiously. Thereafter, water the field every fortnight till the rains set in.

During the rainy season irrigate only when there is a break. Again, irrigate once when the crop is in flower. Such an irrigation results in a higher cotton yield.

After the first irrigation, thin out the crop when the field is ready for it. Leave a distance of one foot between the plants and 2½ feet between the rows. This way there will be about 17,424 plants in all in an acre.

2. Fertilize Liberally

It is recommended that the cotton should receive 2 to

2½ maunds of ammonium sulphate or calcium ammonium nitrate per acre in addition to the farmyard manure you supply.

Give this ammount in two doses—the first after the thinning and the second when the crop is in flower and the bolls start forming. Place the fertilizer three inches away from the base of the plant.

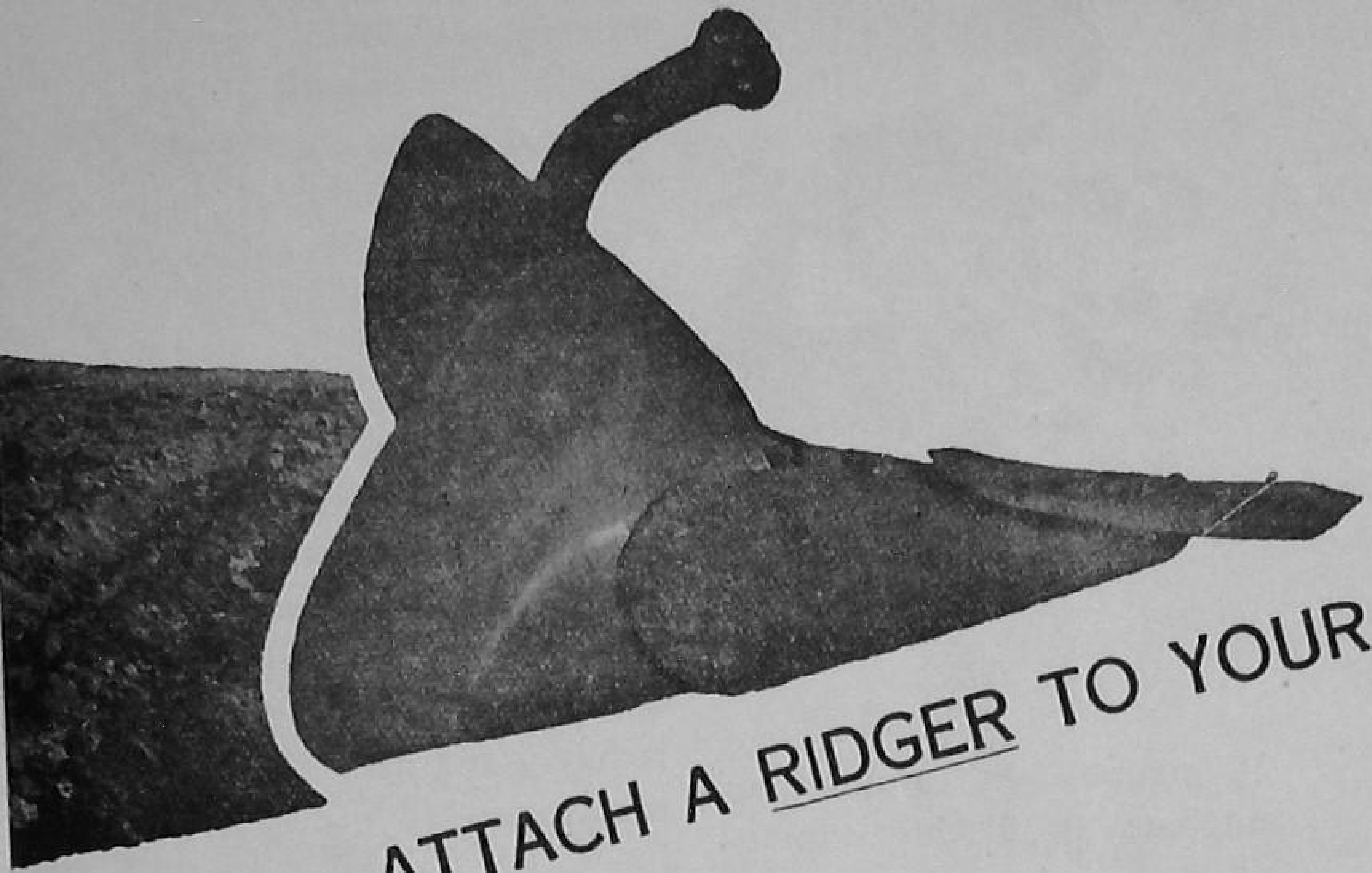
3. And Spray in Time

June, July and August are the months when cotton is attacked by several pests. Whether there is any attack or not, better spray the crop thrice—first in June, next in mid-July and the third one in August so as to avoid only pest trouble.

For each spray use two pounds of BHC 50 per cent and two pounds of DDT 50 per cent wettable powder or 1 pound of Endrin. Mix these in 80 to 100 gallons of water, and spray.

Such a spraying schedule will keep down three vicious pests of cotton—white flies, jassids and leaf rollers at one time. At the same time the boll-worm attack will be reduced to half by such sprayings.

In all you might have to spend about 30 rupees for spraying, but the returns will be many times more.



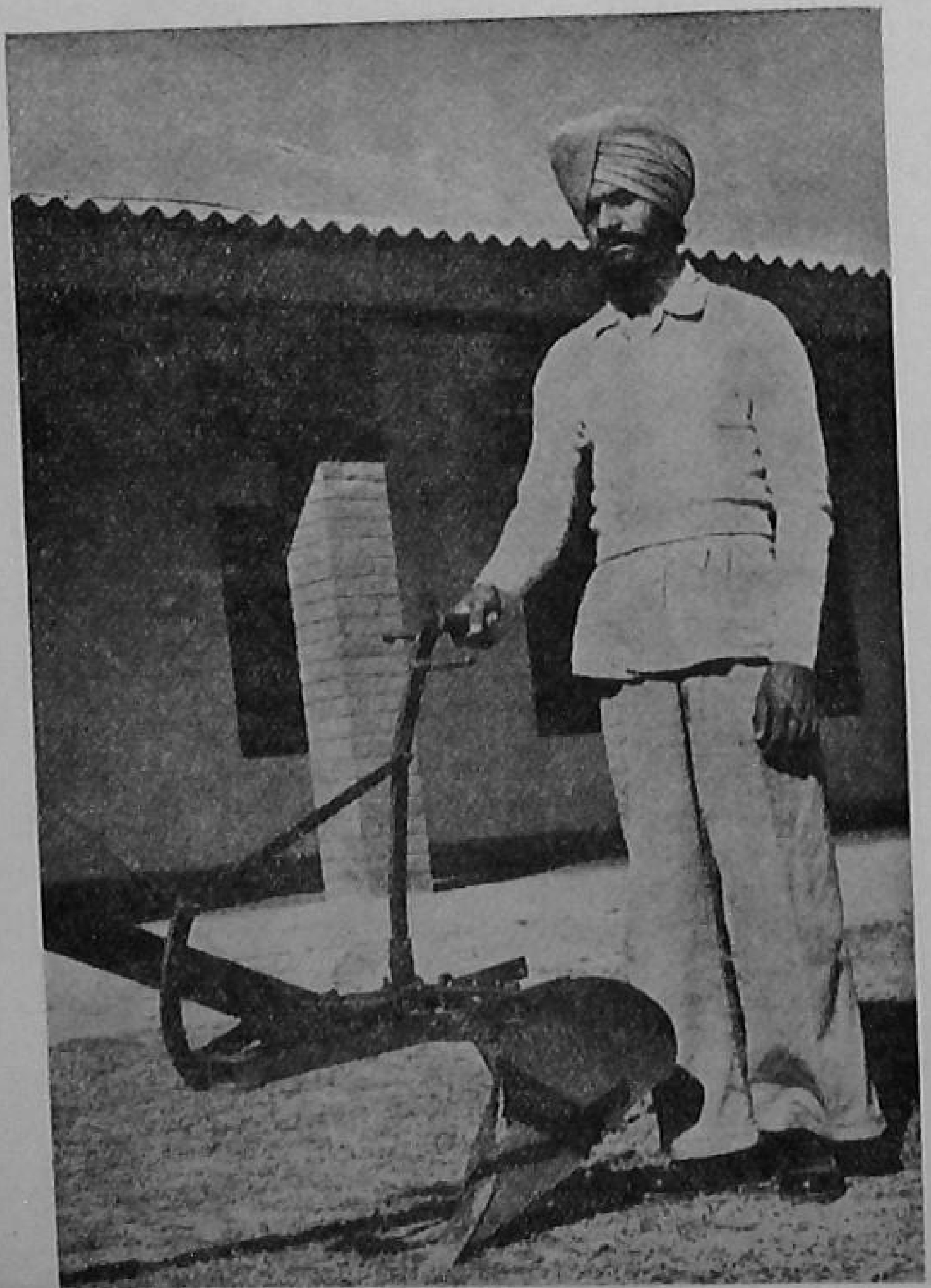
ATTACH A RIDGER TO YOUR CULTIVATOR

By D.N. KHERDEKAR

WHEN you grow vegetables or irrigated field crops such as sugarcane or potatoes, or have an orchard, you have to make ridges and furrows. Some farmers use a ridger plough for this purpose after the land is ploughed, harrowed and levelled. They use the ridger plough again for earthing up the crops. They cannot, however, use it for the normal ploughing.

Making furrows can be easily done with a ridger attached to a multi-purpose implement such as a three-tined cultivator (like the *triphali*, *tifan* or Akola hoe). Like the ridger attachment, you can attach a standard mould-board plough, or seeding attachment to such a cultivator.

With a light ridger attached to the cultivator, you can make furrows 6 to 8 inches deep and 8 inches to a foot wide. However, before making the furrows, see that the soil has been properly pulverized. A ridger attachment will not work on unploughed land or on a hard soil.



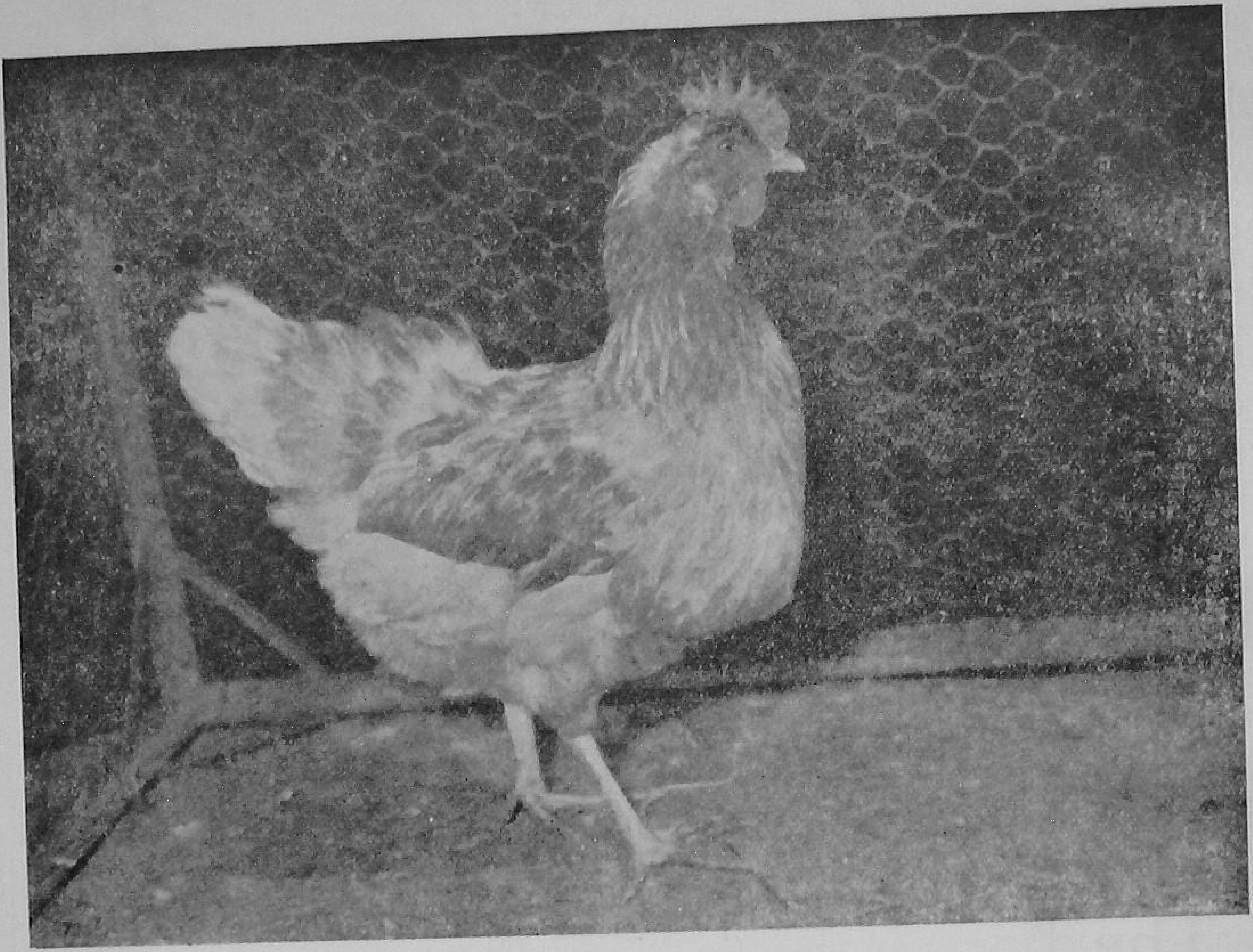
A cultivator with a ridger attached can be easily worked by a pair of bullocks. By changing the angle of the beam, you can increase or decrease the depth of the furrow. A cultivator can be had for 40 to 45 rupees and a ridger attachment will cost you rupees 25 more. The implement is simple and can be easily repaired in your village.

The POULTRY BREEDS that pay

By S.G. IYER

OUR poultry-keepers know that it is not paying to keep *desi* birds. Hence, they commonly ask this question : What breed should we keep ?

The breed you should keep depends upon the purpose for which you are keeping poultry. Most people in our country keep poultry for producing eggs. The egg market to which you sell your poultry produce also influences the type of breed you have to keep. It is no use keeping a breed that produces brown coloured eggs when the market demand is for white eggs.



A Rhode Island Red hen is a good layer and a producer of good quality meat

In India, there are a few breeds that can give you a high egg production. Among these, White Leghorn and Rhode Island Red are the most popular breeds.

A pure-bred hen, laying 150 eggs a year, produces eggs about three times her own weight. A hen must, therefore, be vigorous, as shown by bright full eyes, a bright red comb and wattles, and a strong body with well-placed legs. Breed alone does not count. The strain of the breed is also important, because within a breed only a few strains lay well.

Many commercial producers prefer White Leghorns to other breeds. The breed is well-suited to hot, dry areas. The birds seldom go broody. They are very good for intensive management. The eggs they lay are white-shelled and large in size. But White Leghorns do not produce as good meat as Rhode Island Reds do.

In keeping White Leghorns, you should be aware of one thing: if they are hatched too early, that is, in September and October, they tend to go on moult after laying for three or four months, when they are about ten months old. This you can overcome by carefully selecting the breeding birds. Leghorn pullets start laying at about 5½ months of age. They generally start laying

mouth Rock for commercial egg production. A first cross between two good laying strains of different breeds such as Australorp and White Leghorn or Rhode Island Red and White Leghorn is good for commercial egg production and you can get about 20 per cent more eggs from the cross-bred birds. The male birds of the cross-bred stock make good table poultry.

If you prefer to produce table birds for sale, you should go in for the broiler strain of the White Rock breed.

Apart from their breeding background, look for the following characteristics in the birds while selecting them for your poultry farm.

WHITE LEGHORN

The comb is single. The face is bright red. The wattles are red, large and fine in texture. The eyes are bright red and prominent. The standard weight of the breed is : cockerel five pounds, pullet four pounds. The colour of the feathers is solid white. The tail feathers are usually carried at an angle of 45°. The body should be deep with broad back. The abdomen of a good layer should show at least four-finger space between the breast bone and the pubic bones.

RHODE ISLAND RED

The comb and wattles are red, and not so well-developed as in White Leghorn. The face is bright red. The eyes are also red and bright.

The standard weights are : cockerel six pounds, pullet five pounds. The feathers are mostly rich red on the body. Neck, wing and tail feathers show black markings, and occasionally, one or two white feathers may be seen. The tail is usually carried at an angle of 30°. The body of a good laying bird is deep, with a long and broad back and the abdomen should show five to six fingers space between the breast bone and the pubic bones.

You can get White Leghorns and Rhode Island Reds from Government Poultry Farms. You can also obtain cross-bred birds from these farms if you can book your order early. These will be more suitable for backyard poultry keeping.

Whatever the breed you keep, you will have to feed the birds well to make them really pay.

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CUTTING SHORT THE DRY PERIOD OF COWS

By HARBANS SINGH

MANY villagers do not have their cows served for many months after calving. As a result, village cows calve at intervals of 18 to 20 months. Of this period, 9 to 11 months are generally dry. Some villagers also believe that if the cows are served early, it will only lead to a short milking period and a low milk yield.

This, however, is a wrong impression. The shorter the interval between two calvings the better the animal as a milk producer.

Uniform calving will mean an even milk supply all the year round.

Serve the cow as early as possible after calving. If you have taken good care of the animal, she should be able to conceive within 100 days of calving. If you serve the cow within this period, not only milk production increases but the calf born also is heavier in weight.

To serve the cow in time, you should watch her for heat signs. A cow comes into heat every 19 to 21 days. Each time the heat lasts for 12 to 24 hours. The best time to serve the cow is from the middle of the heat period to the end of heat. A she-buffalo comes into heat every 21 to 23 days. The heat lasts for 18 to 36 hours. As in the case of the cow, the best time of service is mid-heat to the end of heat.

Look for the following signs of heat in the cow or the buffalo:

Restlessness in the animal.

Reduced milk yield.

Flow of a colourless transparent mucus from the genital organs which many times is seen on the tail and flanks. Sometimes, the external genital opening is swollen and red.

Bellowing and keeping the tail raised.

Frequently mounting other cows.

Sometimes, milk seen in the teats after the animal is completely milked.

If the animal does not come into heat in time, show it to a veterinary doctor.

Cows take 280 days for calving from the date of service and she-buffaloes 310 days. Generally, cows calve from January to April and buffaloes from August to November.

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GREEN MANURING

at almost no cost

SOME West Godavari farmers are green manuring their lands in a novel way, almost at no cost. They are raising in their rice fallows a crop of *Indigofera* (indigo) as green manure together with a cash crop of of groundnut. The usual practice, however, was to raise with irrigation a crop of groundnut alone.

This new method, they feel, is useful to them in many ways. For they are not to spare any land exclusively for a green manure crop, which is hard to do for many a farmer with small holdings. They can get a good groundnut crop over and above a green manure crop. Moreover, it makes their land richer for the next crop and they get a stock of green manure seed for their land for future use. It has enabled the farmers to harvest a bumper crop of paddy that followed the indigo—groundnut mixture. This is the way how they do it.

Light soil of the sandy loam type is ploughed three or four times with a country plough after the previous paddy crop is harvested. Five to ten cartloads of farmyard manure or compost together with 200 pounds of superphosphate is applied to an acre while preparing it. The field is then made into small plots of convenient size for irrigation and kept ready for sowing.

Groundnut seed is sown behind a country plough. About 160 to 180 pounds of *T. M. V-2* (Bunchy type) pods are sufficient to provide seed for sowing an acre.

After the groundnut seed is sown, eight to ten pounds of indigo seed is broadcast on the same land. The levelling plank is then drawn to cover the seed with earth.

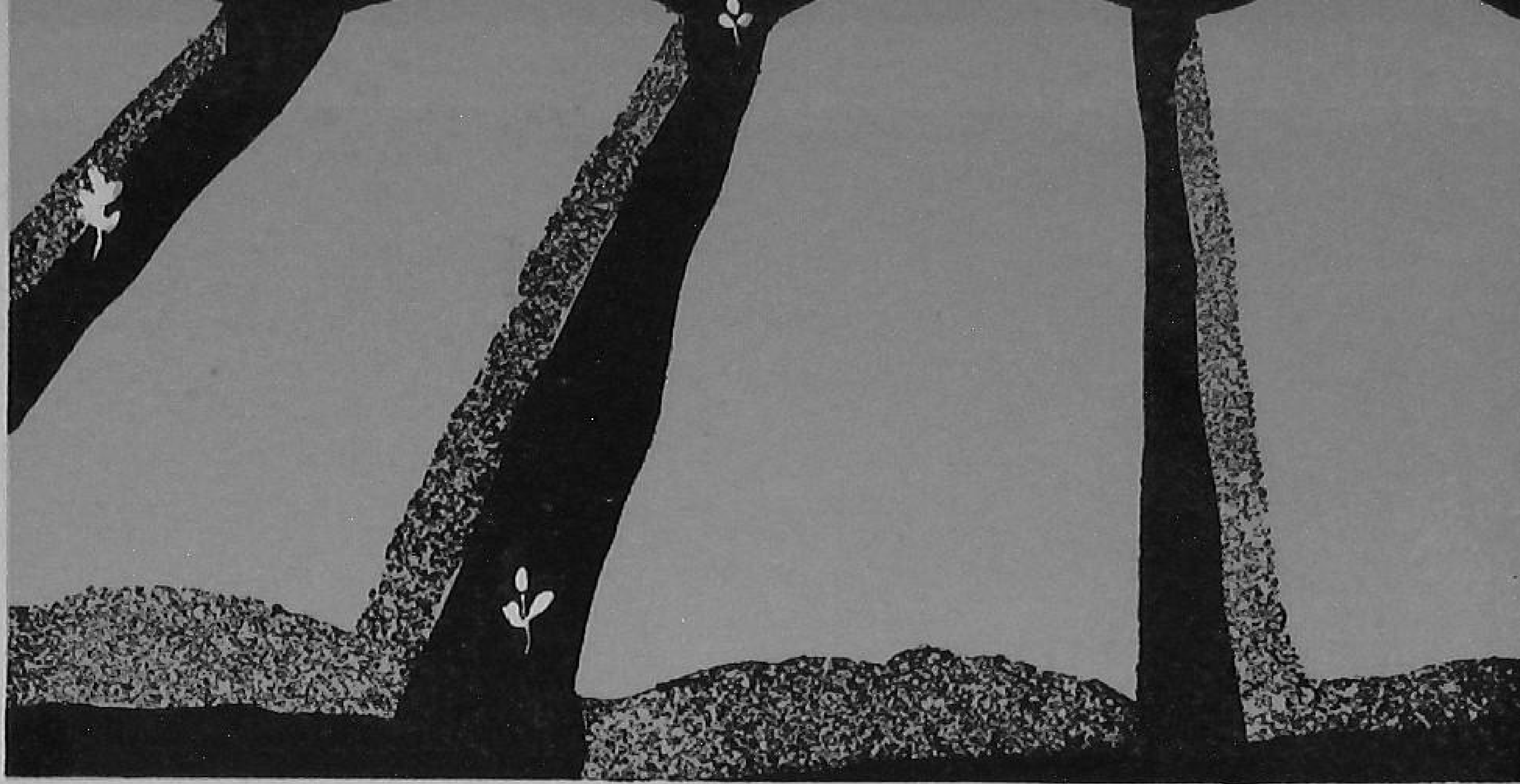
First irrigation is given 20 to 25 days after sowing the groundnut. This helps the indigo to pick up growth. The second irrigation is given about a month after the first, when the indigo plants are about four inches high.

If the crop in the field does not appear to be sufficiently vigorous, it is topdressed at five pounds of nitrogen per acre during the second irrigation.

If sown by the third week of December, groundnut becomes ready for harvest by the first week of April. The indigo plants are one to one and a half feet high by then. Subsequently by May if there are no rains and the soil is too dry, the indigo crop is given another irrigation.

A crop of groundnut yields about 1,500 to 2,000 pounds of pods per acre.

The indigo plants yield enough seed to make the farmer self-sufficient for his future needs, before it is pulled out and puddled in the field. About 5 to 6 thousand pounds of green matter is obtained from an acre of an indigo crop. The land is then prepared for the next paddy crop. The farmers of West Godavari who have been following this practice are harvesting, on an average, 50 maunds of paddy to an acre.



PREPARE COMPOST THE RIGHT WAY

By A. RAMASAMY

COMPOST making is not just piling up rubbish in a pit. There is a right way of preparing it.

While many farmers are aware of the value of compost as a manure and some of them have also taken to preparing their own requirement, they do not know how to make it in the proper way. As a result it becomes less valuable as a manure.

Compost manure contains most of the food elements your plants need. When you apply it to the soil, you not only supply the plant food but also improve its health, structure as well as its water-holding capacity.

To get the full benefit out of your compost, prepare it in a right manner.

Select a place at a higher level to avoid water stagnation during the rainy season.

Dig a pit 15 feet long, 8 feet broad and 3 feet deep. You will be able to get at least 14 cartloads of compost from a pit of this size.

Next, construct a 1½-foot high wall around the pit to prevent the rain water entering into it from the surrounding areas. As, too much of moisture spoils the manure and reduces its nitrogen content. Now, start filling the pit with the material like sweepings, dry leaves, green leaves and farm wastes. It is better to divide the pit into three portions and fill it part by part. It will take anything from 1 to 1½ months for filling the pit completely.

Do not leave the material you put in the pit uncovered. After filling it, cover the top portion of the pit with silt and cow-dung in the shape of a dome.

Do not disturb the pit for three weeks except for giving three waterings during this period. Apply water just to soak the compost material. Too much of watering is bad for your compost. It will be better if you mix well-rotted cow-dung with the water before sprinkling it over the heap. After four to six weeks' time, the compost will be ready for use.

Compost prepared this way will have more nitrogen and will serve your crop better.

The Package Programme in Tanjore

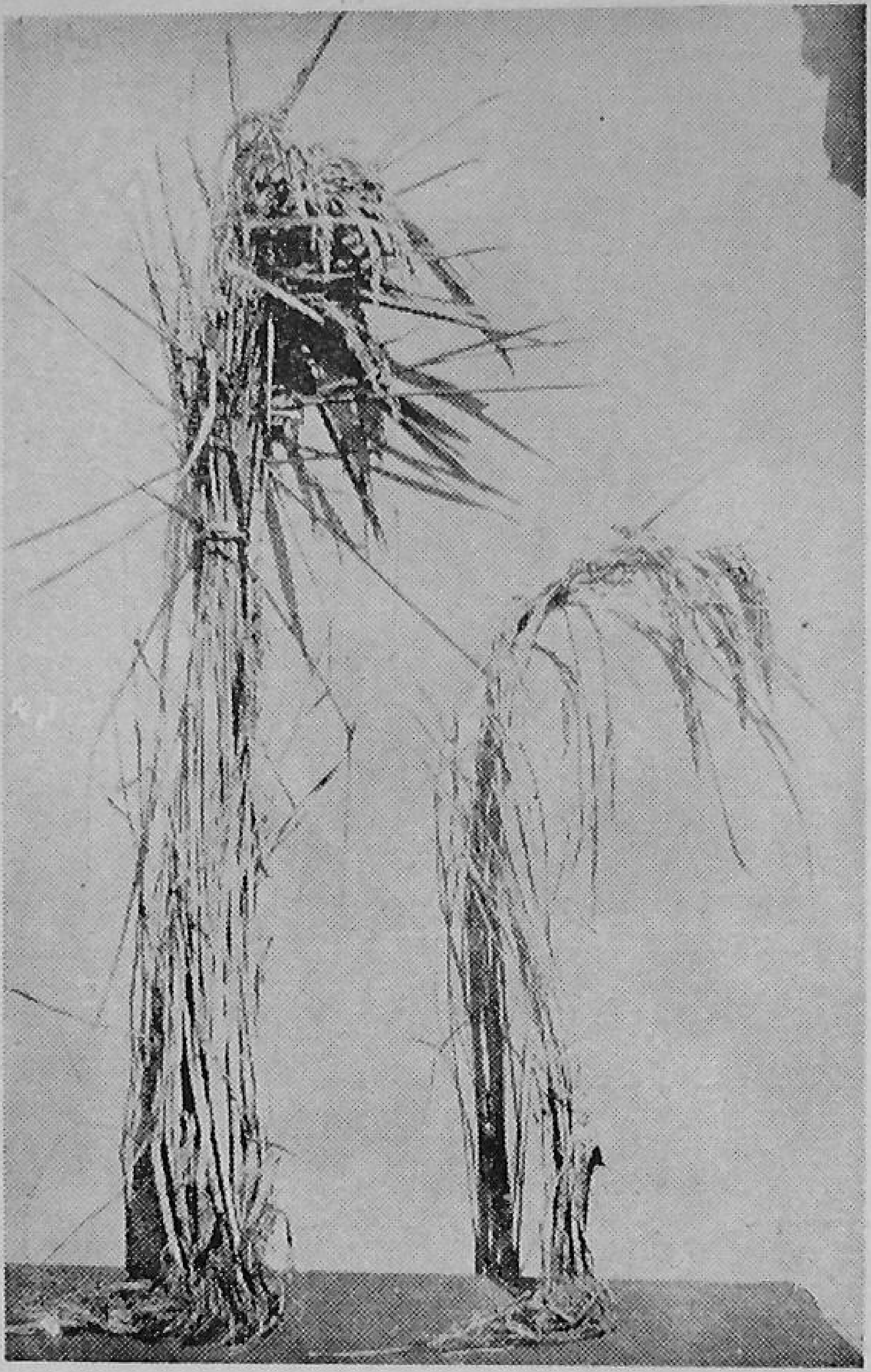
INDIA'S recent approach towards a rapid rise in food and farm production is the inauguration of the Intensive Agricultural District Programme (The Package Programme as it is popularly called) initially in seven selected districts. Tanjore District in Madras State opened its doors to the Programme in April, 1960, and provides an example of the vigour with which this Programme is being implemented.

The District has set its goal of raising the per-acre yield of rice, the principal food crop of the District, to 1,650 pounds from the present 1,320.

Popularisation of improved agricultural implements which save both labour and time is one of the highlights of the Programme Here a Gram Sevak is seen explaining the salient features of an improved plough and the wet-land puddler to a group of farmers in Tiruchinapundi village

Tanjore farmers are reaping richer paddy harvests thanks to the Intensive Agricultural District Programme

Timely plant protection measures save crop losses from pests and diseases. Under the Programme, sufficient pesticides and plant protection appliances are made available to the farmers of Tanjore. Here a cultivator is seen dusting his paddy crop against rice hispa



Two clumps of paddy. The one on the left with heavy tillering and grain formation is from a field in Tanjore cultivated by the Japanese method. The poor one on the right is from an adjacent field cultivated by the local method

In a year, as per a set plan, 3½ lakh acres of Tanjore's 15 lakh acres under paddy have been put under improved practices. To aid farmers reap better harvest, 1,200 tons of improved seed, 4,500 tons of fertilizers and 6,000 improved implements were made available to the farmers. Over 53,000 farmers were helped in preparing individual farm production plans. To make the job of taking up improved practices easy, over 1,800 demonstrations were carried out in the District and short-term credit worth 54 lakhs of rupees was made available to them. Sufficient care is being taken to protect the crops from pests and diseases, and during last year nearly 400 tons of chemicals were utilized for the purpose.

The Rajasthan Farmers' FERTILIZER

GUIDE

Districts or areas for which recommended	Dose of nutrients in lb. per acre			Time and method of application	Remarks
	Nitrogen	*Phosphoric Acid*	*Potash*		
				Wheat (Unirrigated)	
Kota, Bundi and Jhalawar and other tracts.	15	20	—	Nitrogenous fertilizer to be broadcast and phosphatic fertilizer to be drilled 2" below the seed before sowing.	Application of K_2O may be made if indicated by soil test.
				Wheat (Irrigated)	
All wheat-growing areas.	40	40	—	Nitrogenous fertilizer to be broadcast just before sowing or with first irrigation and phosphatic fertilizer to be drilled 2" below the seed before sowing.	do.

Districts or areas for which recommended	Dose of nutrients in lb. per acre			Time and method of application	Remarks
	Nitrogen	Phosphoric Acid	Potash		
			Barley		
Jaipur, Alwar and Bharatpur, Bundy, Ganganagar and other areas.	30	30	—	Nitrogenous fertilizer to be broadcast just before sowing or with first irrigation and phosphatic fertilizer to be drilled 2" below the seed before sowing.	Application of K_2O may be made if indicated by soil test.
			Maize (Local)		
Udaipur, Bhilwara, Ajmer Chittorgarh, Banswara and Dungarpur and other areas.	40	40	—	do.	do.
			Bajra		
Ajmer Division, Jodhpur, Pali, Nagore and Jalore and other tracts.	15	—	—	Nitrogenous fertilizer to be broadcast just before sowing.	Application of P_2O_5 and K_2O may be made if indicated by soil test.
			Paddy		
Kota, Bundi, Udaipur divisions and Sawai Madhopur and other tracts.	40	20	—	Nitrogenous fertilizer should be applied in two doses. Broadcast half of it at the time of sowing or transplanting and the remaining half as top-dressing at tillering time.	Application of K_2O may be made if indicated by soil tests.
			Cotton (Unirrigated)		
Kota, Tonk, Udaipur Division and other areas.	30	30	—	Nitrogenous fertilizer to be broadcast and phosphatic fertilizer to be drilled at 2" below the seed at the time of sowing.	Application of K_2O may be made if indicated by soil test.

Districts or areas for which recommended	*Dose of nutrients in lb. per acre*			*Time and method of application*	*Remarks*
	Nitrogen	*Phosphoric Acid*	*Potash*		
				Cotton (Irrigated)	
Shri Ganganagar and other areas.	60	60	—	Half of the nitrogenous fertilizer to be broadcast just before sowing and the remaining as top-dressing just before flowering. Phosphatic fertilizer to be drilled at 2" below the seed at the sowing time.	Application of K_2O may be made if indicated by soil test.
				Sugarcane	
do.	150	100	—	Half of the nitrogenous fertilizer to be broadcast just before planting and the remaining half to be applied at earthing up time. Phosphatic fertilizer is to be drilled 2" below the seed just before planting.	do.
				Jowar (Grain)	
Kota Division, Sawai Madhopur, Tonk District and other areas.	30	20	—	Nitrogenous fertilizer to be broadcast and phosphatic fertilizer to be drilled 2" below the seed just before sowing.	do.
				Vegetables	
For all Districts	75	75	30	Nitrogenous fertilizer should be applied in two equal doses by broadcasting just before sowing and as top-dressing after about a month. Phosphatic fertilizer is to be drilled 2" below the seed and muriate of potash to be broadcast at the time of sowing.	do.
				Citrus	
do.				do.	do.

4-STEPS
TO BETTER BAJRA YIELD

PRIZE-winning *bajra*-growers in Gujarat and Maharashtra States have shown that high yields of *bajra* can be obtained anywhere in the *bajra*-growing areas of our country. These farmers have raised five to six times as much as other farmers usually harvest.

To get better *bajra* yield, four things are important : improved seed, timely sowing, proper spacing and an adequate manuring.

Such a bumper *bajra* crop can be yours too if you follow the right method of growing it

There are several improved varieties of *bajra* suitable for different soil and climatic conditions. Select the one that suits your farm best. Here are a few improved varieties from which one can choose.

For Gujarat and Maharashtra
AF. 3, B-207, 32-C and *14.D.*

For Punjab
T.55, A.13, 5-250 and *S. 53.*

For Rajasthan
T.5

For Uttar Pradesh
Local selections

For Andhra Pradesh
AKP. 2

For Madras
No.s 1,2,3,4 and *5, KI, XI* and *X2.*

For Mysore
Local selections and *Transval sajje.*

For Delhi
T.55

Sow *bajra* in time to get the best yields. *Bajra* does not like water-stagnation. If the sowing is followed by heavy rains, the seedlings die off in large numbers. The crop also suffers badly if there are rains during the flowering stage. Hence, you must adjust the sowing time accordingly.

The best time for sowing *bajra* in the Punjab is first to third week of July. In the South, however, it is best sown during February or March.

Always sow *bajra* very thinly. Experiments in the Punjab have shown that the best spacing for *bajra* is one foot by one foot. Some farmers mark lines 18 inches apart both ways and dibble 5 to 6 seeds at the crossings of these lines.

Since *bajra* seed is very small, do not sow it very deep.

Bajra crop needs only nitrogen. The crop, especially the hybrid one, responds very well to nitrogen. You can apply 40 pounds of nitrogen even under *barani* conditions with profit. But in low rainfall areas apply only 20 pounds of it.

Better apply the amount in split doses. *Bajra* has to be thinned out considerably. Hence, if you apply all the fertilizer in one dose, a part of it will be wasted. The crop can benefit if you apply the fertilizer once before the sowing and again before the ears start forming.

Follow the four steps and you are sure to get much more than what you have been getting so far.

We welcome your

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and
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NEW DELHI

BETTER FARMING TIPS

DOUBLE YOUR GINGER YIELD

THERE are two ways by which you can increase your per-acre yield of ginger. One is to plant the crop early and the other to mulch the crop with green leaf.

Experiments in Wyanad (Kerala State) showed that the crop planted in mid-April gave better yields than those planted in the beginning of May, mid-May and early June. Normally, on the West Coast, farmers plant ginger a few days before the onset of the south-west monsoon.

Experiments also show that mulching the crop with green leaf at 20,000 pounds per acre applied in three instalments can more than double the yield.

The mulch also benefits the succeeding crops.

ROGUING PAYS

MANY farmers grumble when they are asked to pull out undesirable plants from their fields.

They think it is inconvenient to do so. They also feel that there will be some loss in yield if they do so.

But they do not know that this small inconvenience and small loss in yield this year will pay well in the coming year.

If an improved variety they are growing should yield well, the first condition is that they keep it pure. If the seeds get mixed up, the crop does not ripen uniformly. The yield and quality of the produce also go down. Hence they obtain a lower price for the produce.

Farmers should, therefore, take care to see to it that they don't grow inferior varieties or diseased plants along with the improved variety. For this, they should 'rogue' the crop or remove the undesirable plants from the field before harvest. Only then they can keep the crop healthy and pure.

Farmers are advised to rogue out all diseased plants and burn them and also remove admixtures of any kind.

While harvesting a crop, they should also make sure that they don't mix up different varieties. They should thresh each variety separately and store the seed after drying in clean and disinfected containers.

STEM-BREAKING IN ARECANUT

IF you are an arecanut farmer, stem-breaking of the palms during summer surely is one of your problems.

During the summer months, palms exposed to the hot sun develop dark patches, especially on the south-western side. The stems get cracked, and wood-rotting fungi enter. On a windy day, especially during the monsoon, such stems break.

Experience shows that doing two things helps to get over this problem. First, grow leafy trees on the south-western side of your plantation. Second, protect the stems of unaffected palms with areca leaf sheaths.

If you have a few of the trees damaged already, you can tie split pieces of areca stems around the stems of such trees. This will protect them against heavy winds.

COTTON DISEASES CAN BE CHECKED

MANY of farmers are now following some simple precautions for checking the diseases of the cotton crop.

They are now careful not to stock the cotton stalks after harvest if there had been an attack from one or more diseases on the crop. They pull out the stems immediately after harvest and burn them. Along with the stems, they also destroy all shed leaves, flowers and bolls.

Research has found new varieties that resist attack from wilt, a common disease of cotton in many areas. But for other diseases like blackarm and root rot, no disease-resistant varieties are yet available, and hence the farmers will have to take other measures to check these diseases.

Intercultivating a legume like *moth*, which covers the soil and prevents the soil

temperature from rising, is one good way of checking the root rot disease. Patches in which the disease has appeared should also be isolated, and in these cotton should be rotated with some other crop.

For blackarm and anthracnose diseases, treating the seed with a chemical before sowing has given good results.

In all cases where a disease has appeared, it pays farmers to show the disease-affected plants to the Agricultural Officer of the area so that he may identify the disease and suggest how it can be controlled.

RENEW COTTON SEED

FARMERS growing improved varieties of cotton in Madras State are currently being advised that they should renew the seed once every three or four years.

This is because the practice of keeping the seed of one harvest for the next sowing continuously for years, as is being followed by farmers, has disadvantages.

If the initial seed of the improved variety the farmer obtained, contained any 'off-type' seed, these plants will go unnoticed in the first few crops. But if they are not removed in time, they will increase in number and the cotton from them will reduce the quality of the produce obtained from the crop.

Even if the farmer removes such off-types from time to time, he will find that in ginning, seeds get mixed up in spite of all the care taken.

Such seed mixtures will not yield the same quality cotton as the original seed did.

Farmers can buy their cotton seed for renewing their stocks from the stores of the Agricultural Department or other agencies like co-operative societies.

STORE GUR IN ALKATHENE-LINED GUNNY BAGS

THE best method of packing *gur* for storage or for transport is to pack it in alkathene-lined gunny bags.

This was seen in experiments conducted in Bihar with different methods of storing *gur*.

For storing or transporting large *gur* blocks (*chakkis*), pack them tightly in alkathene-lined gunnies with bitumen bonding. Stitch the gunnies firm with a double thread of jute. This way, *gur* will be safe from damage, and will not absorb moisture from outside.

For small blocks or lumps (*bhelis*), use strong gunny bags with double seem and alkathene-lined with bitumen bonding (28 inches x 19 inches . Pack each gunny bag with only about 32 seers of *gur*, and not full. Close the mouth tightly with stitches of a double thread of jute.

In both cases, keep the bags open during the summer months so that the *gur* may be properly dried. Stitch the mouth of the bags before the rainy season starts.

PLANT LARGER ONION SEEDLINGS

PLANT larger onion seedlings and get a higher yield of onions.

This advice to farmers is based on experiments carried out at the Agricultural College Farm at Ludhiana in the Punjab.

To get larger seedlings for planting, you have to sow double the nursery area (1/10th of an acre as against the normal 1/20th of an acre) with the same quantity (normally six to eight pounds) of seed you use. The seed should be distributed evenly. The beds should also get ammonium sulphate and ash.

Watering and weeding are done regularly, and when seedlings are about three inches high, a dilute solution of ammonium sulphate is sprinkled over them (a handful of ammonium sulphate in three gallons of water) and immediately after washed with water to prevent the ammonium sulphate solution from harming the leaves.

The seedlings, which will be double the size of those raised by the ordinary method in six to eight weeks, are transplanted.

At the College Farm, by planting the bigger-sized seedlings raised this way, they were able to obtain 37 per cent more onion yield over the one obtained with the seedlings raised in the normal way.

Your kitchen garden should have

MALTA LEMON

By C.A. THOMAS

YOUR kitchen garden should have one, two or many malta lemon plants, depending upon the size of your garden. The malta lemon will not only provide you with a fruit from which you can make refreshing drinks but also other preserves. The spare lemons you can sell and thus add to your side income.

Malta lemon has an attractive fruit colour. However, it is inferior to other lemons in taste. But in food value, it is a very important fruit. Squashes and pickles are the common products made from malta.

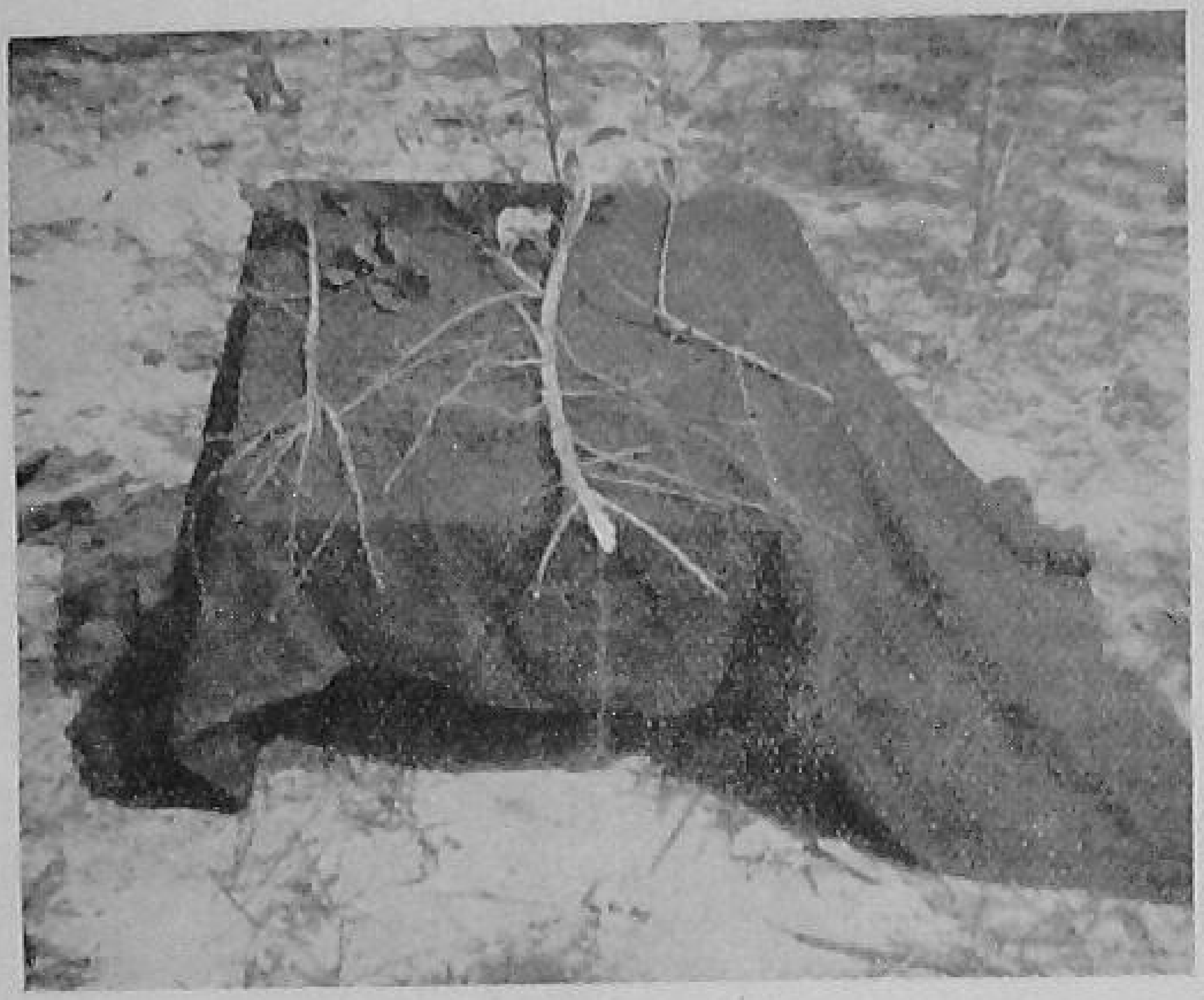
You can grow malta up to an elevation of 3,000 feet. It can come up in the humid coastal areas as well as in the hilly tracts of the tropical region.

Malta lemon is a hardy plant. It has very many branches, the lower ones spreading out horizontally. As such, when you grow it on a plantation scale, give it a spacing of 18 feet. Planting by the square system will mean 134 malta plants to the acre.

Malta is not planted by seed as its fruit is seedless. You have to propagate the plant by air-layering, using 250 polythene film and leaf mould.

For layering use low hanging branches close to the soil for the purpose. Peel out the outer skin of the branch an inch in length all round. Cover the ring portion with moist soil. Roots strike out within

a month. Severe the shoot from the mother plant after the roots have been formed and plant it in the rainy season. For planting, dig three feet cube pits in May. Pits should be spaced out at a distance of 18 to 20 feet. Fill them with equal quantities of rich garden soil, cattle manure or compost and sand. Plant one or two of the rooted cuttings per pit.



Cuttings ready for planting

After the cuttings have established, give each plant a manure mixture consisting of cattle manure and wood-ash and also ammonium sulphate, muriate of potash and superphosphate. Gradually increase the dose of the last three as the plant advances in age.

To a full-grown plant in your kitchen garden, apply 40 kilograms of farmyard manure and 10 kilograms of wood-ash, or 1½ kilograms of ammonium sulphate and ½ kilogram of muriate of potash and ½ kilogram of superphosphate, once a year. It is better to supply this amount in two doses, in July and in December.

If you are in the humid areas of the country, you need not irrigate the plant ; but in arid areas, irrigate the maltas at frequent intervals. Once a week during summer and once a fortnight during winter, give maltas a profuse watering.

Malta lemon grows 8 to 12 feet high. It does not need any pruning but stock sprouts and water suckers should be removed in the early stages. No root pruning need be given.

In a medium fertile soil, maltas will generally bear after two years. All full-grown and well-bearing plants produce 500 to 1,000 fruits a year.

BLIGHTS OF POTATO

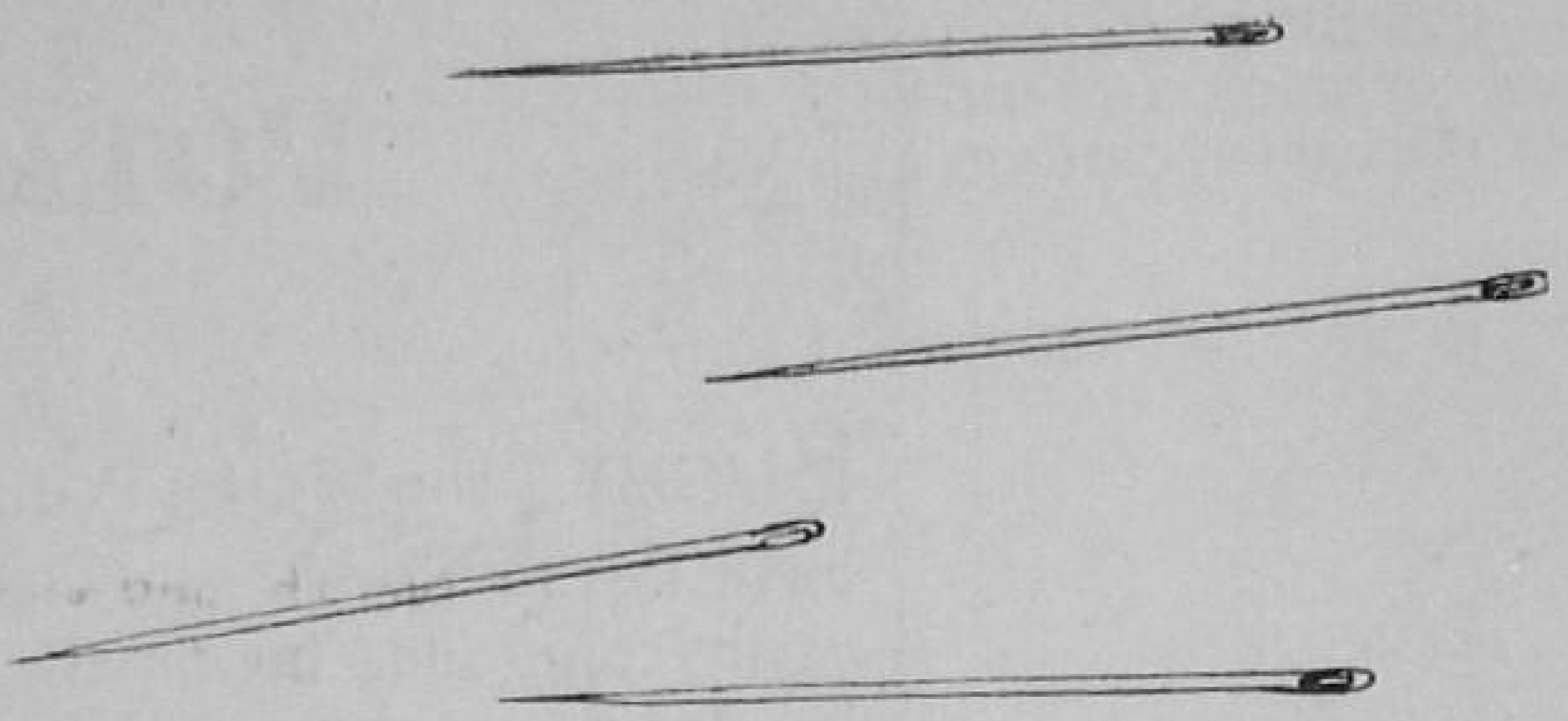
BLIGHT, the serious disease of potato both in the North and the South, can be easily controlled by timely sprayings with Bordeaux mixture or any other copper fungicide.

Blight is a fungus disease, which attacks the potato crop at its early stages of growth (early blight), as well as at the later stages (late blight). Early blight appears in the shape of dark brown or almost black circular spots on the lower leaves. As the disease advances, the leaves roll or curl up and the stalks turn yellow and dry up.

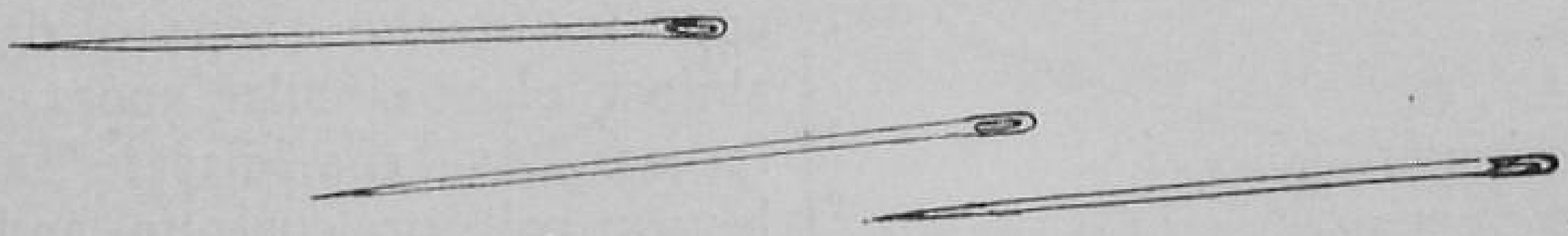
In the case of late blight, which is far more serious, the tips or the margins of lower leaves develop brownish black or purple spots. The disease spreads to all the green parts of the potato plants and within a week, plants die and rot giving out a foul smell.

To control early and late blights, it is advised that the crop be sprayed three to four times with 5 : 5 : 50 Bordeaux mixture or a copper fungicide or with Zineb wettable powder (one pound in 50 gallons of water) at intervals of 10 to 15 days. Fifty to 80 gallons of the spray solution is sufficient for spraying an acre at a time.

Specialists also advise that farmers use only healthy seed potatoes for planting as blight-affected tubers carry the disease to the next crop.



a case for your needles



By KAMLESH PURI

SURELY, you have been wanting to have some sort of a needle case to keep your needles and prevent them from being lost. Here is how you can make a pretty one, in the shape of a lady.

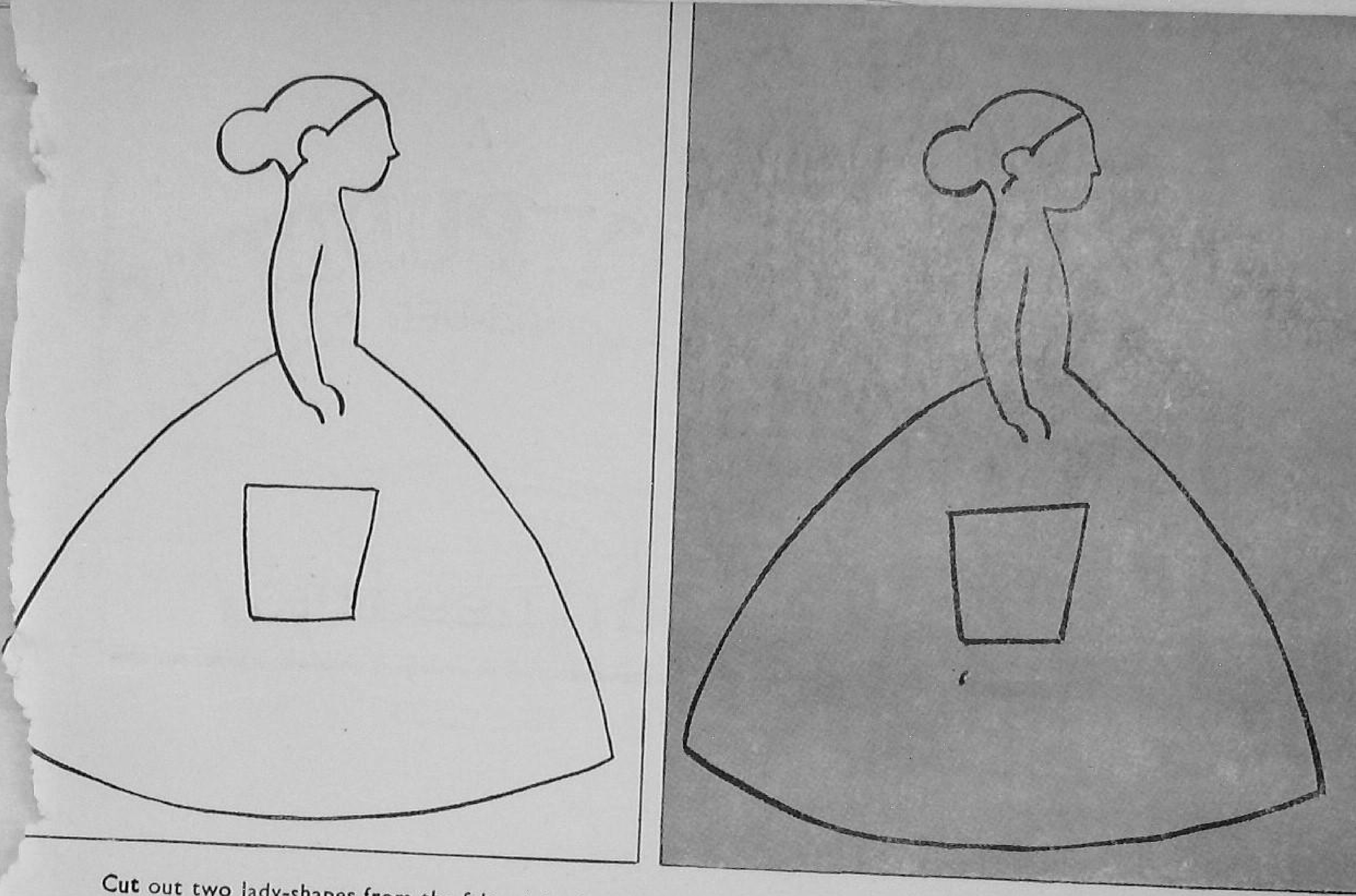
To make this needle case, you need a piece of coloured felt 5 inches by 10 inches, a small piece of flannel, say of 3-inch by 3-inch size and with a contrasting colour, a bit of cotton wool, and some suitable coloured cotton thread.

Trace out the outline and cut out two lady-shapes from the felt.

Join the two pieces from waist upwards by button-hole stitch or by overcasting.

Stuff lightly with a little cotton wool.

Cut out two basket-shapes; a circular base, and a handle from the felt and make up into a basket.



Cut out two lady-shapes from the felt; join them from waist upwards, before stuffing with cotton wool

Attach the handle of the basket to the end of the arm.

Cut a leaf of flannel in the shape of the skirt and attach it inside the top edge of the waist.

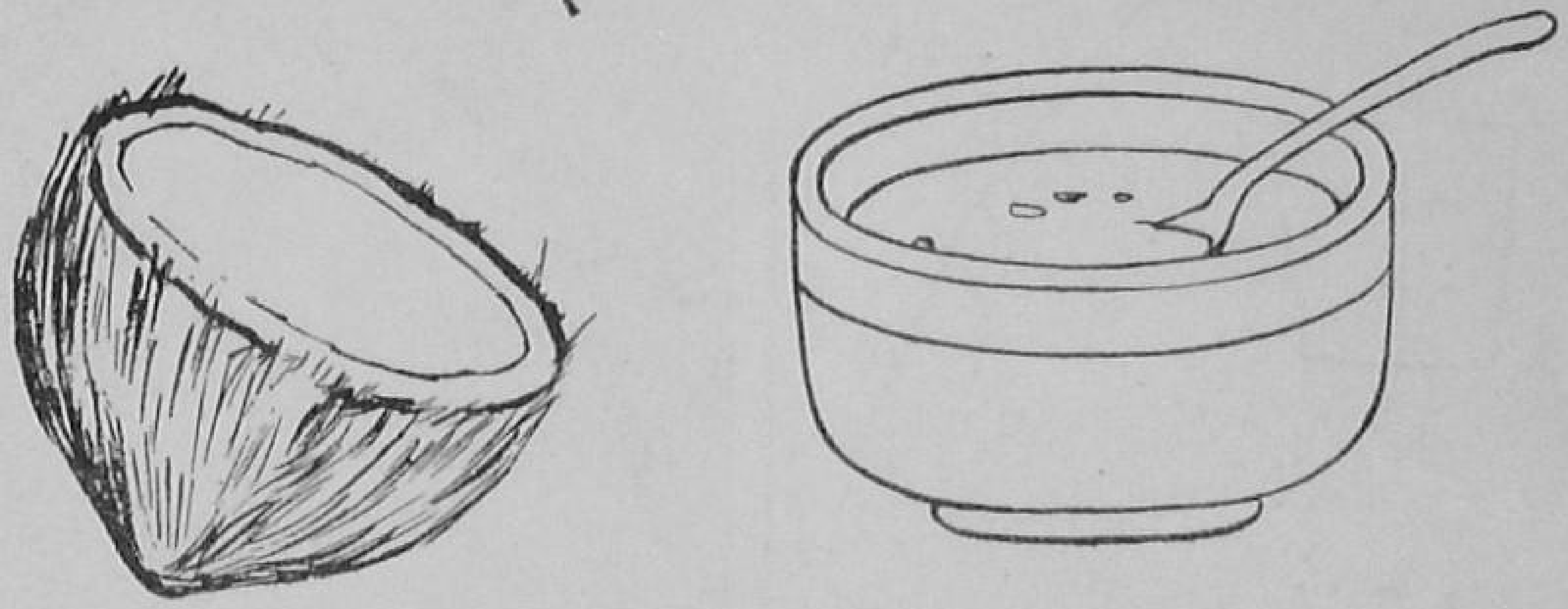
Embroider the lower outer edge of the skirt using four strands of cotton of any colour in lazy daisy stitch giving them knots in the centre.

Make the hair of the lady in black cotton.

Use six strands of black cotton thread for making the hair. The lady needle-case is ready to hold your needles now.

Place a thimble in the basket and stick the pins and needles in the flannel petticoat.

A TASTY PUDDING FROM THE TENDER COCONUT



By R. HALI

IF you can prepare it well, there will be nothing so tasty as the tender coconut pudding, prepared from its kernel. Here is how it is made.

To make this, you will need :

- Five tender coconuts
- Three ounces of *ghee*
- Half a pound of jaggery
- Milk from one coconut
- Half a spoonful of cardamom powder
- A few cashewnuts and raisins

Break open the tender nuts and collect the water with a spoon, and gather the kernel.

Keep the vessel on the oven and fry the raisin and cashew in the *ghee* and take them out.

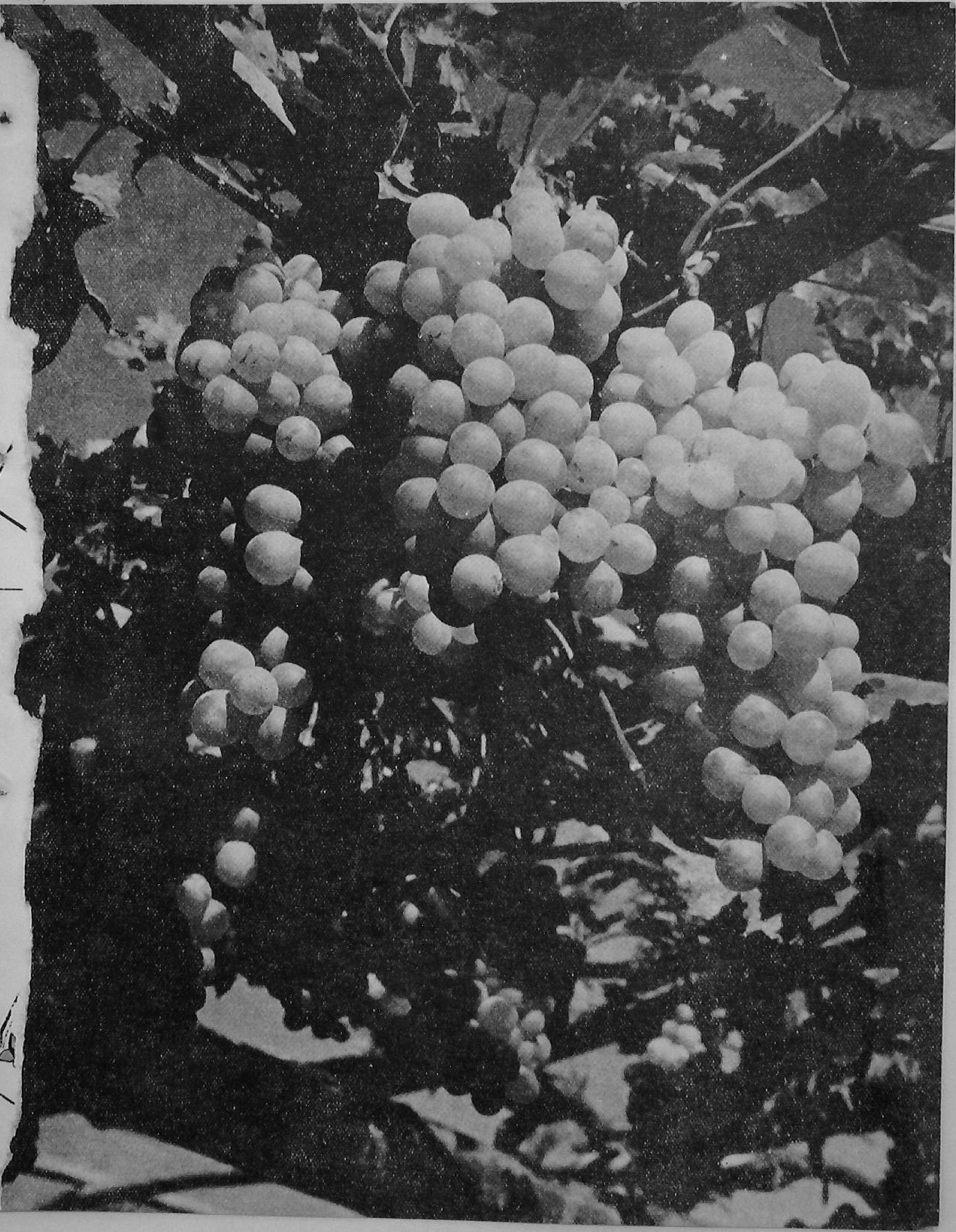
Pour the coconut water in the vessel with jaggery (*gur*) and stir well till it boils.

Once the jaggery melts, put in the tender kernels, warm, and pour in the coconut milk.

Continue the warming till it becomes thick, like a pudding.

Take the vessel from the oven and add the coconut milk. Next put the fried cashew, raisins and cardamom powder. Stir the mixture again.

Your pudding is ready now. Serve it when it is cool.



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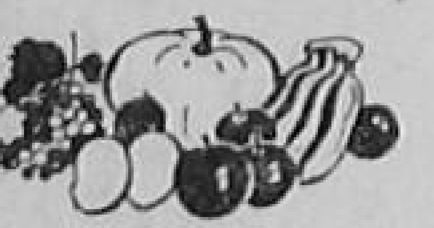

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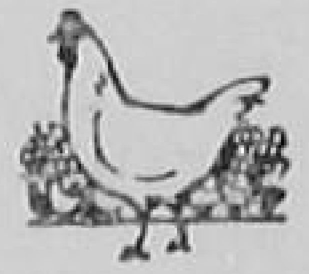

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